

Vol. 8, No. 3

April 18, 1970

Continuing Need For United States Forces In Europe



Secretary Resor with General James H. Polk, Commander in Chief, U.S. Army Europe and Seventh Army, during a visit to USAEUR Headquarters in Heidelberg, Germany.

By Secretary of the Army Stanley R. Resor

(This is the first of a two-part series from a speech by Secretary Resor to the Los Angeles World Affairs Council April 10.)

Increasingly one hears proposals, put forth by sincere and thoughtful men, that the United States should unilaterally reduce its forces in Western Europe.

These suggestions appear to rest on any of several assumptions. It is said:

- -that our forces are no longer needed; or
- -that they could protect Western Europe without being present there; or
- -that we bear an unjust share of the cost of NATO defense: or

-that the domestic demands on our resources are so pressing that NATO conventional defense must be reduced as an economy measure.

These are fair questions. But, the conclusion that substantial (Continued On Page Two)

To Meet Technology's Challenge

By Secretary of the Air Force Robert C. Seamans Jr.

(On April 7 Secretary Seamans was guest speaker at the Georgia-Reliance Symposium on Automation and Society, University of Georgia. Here are highlights of his speech.)

Three years ago, while reading in the general area of automation, I recall seeing an article entitled, "How Technology Will Shape The Future." It occurred to me at the time that this was exactly what we needed to avoid. There is quite a difference between letting technology shape the future and consciously shaping the future ourselves-using technology as a tool.

The latter was suggested by Aldous Huxley in the introduction to Brave New World. He put it like this:

"The sciences of matter can be applied in such a way that they will destroy life or make the living of it impossibly (Continued On Page Six)

CIRCULATION COPY_1



U.S. Forces In Europe ...

(Continued From Page One)

reduction of our deployment in Europe is in order is far from self-evident.

We are at a time of decision. The factors on which that decision must rest are complex. The stakes are high. The Nation should not react without fully considering all possible consequences.

I therefore invite you to take a few minutes to examine our European position with me. I do not do so as a special pleader for the status quo or for global military deployments. Rather, I would hope simply to raise for your consideration the reasons I believe there is a continued necessity for a substantial United States military presence in Europe.

Forces In Europe Necessary

My position involves a seeming paradox. I firmly believe that our forces in Europe are more necessary than ever to preserve the stability of that region. But at the same time, I also believe that we have a more promising opportunity than has existed since the end of World War II. After 25 years of rigid confrontation in Europe, East and West are making preliminary overtures across the lines which separate the forces of NATO and the Warsaw Pact. The long-range goal of all European peoples is the reduction of political contention and military dangers, and the withdrawal of the forces of both superpowers.

We now have a good chance of advancing toward substantial political resolution of the issues dividing Europe and toward a mutual balanced reduction of military forces. That process, however, can proceed only from positions of relatively stable strength. The political and the military realities cannot be separated. However noble our objectives, if by ill-considered actions we disrupt the current balance, we may lose for many years the opportunity that is before us.

Let me turn therefore to the doubts that have been voiced about retaining our forces in Europe. For this audience I need not dwell on the essential role that Western Europe plays in our own economic, political, and military security. Western Europe has, after the United States, the greatest aggregation of economic, political and ideological strength in the world. Its population and combined gross national products are substantially greater than those of the Soviet Union. Twice in the 20th Century we have been forced to intervene to prevent domination of Western Europe by expansionist and essentially hostile German governments. Domination of the region by any essentially hostile power remains an unacceptable threat to our security.

The arguments of those who challenge our NATO force deployments are grouped around three separate propositions.

First, some say, the likelihood of hostile military action by the Warsaw Pact is now so small that our forces in Europe no longer are needed.

Secondly, it is argued that those forces do not constitute a significant deterrent to military adventurism by the Warsaw Pact.

Finally, critics maintain that the cost of these deployments is too great for the United States to continue at the present level.

I should like to take up each of these points in turn.

First is the claim that the forces in Europe are not necessary.

The world has changed, critics say. These forces have served their purpose, and now are little more than costly relics of another era.

Even those who criticize our deployments in Europe usually recognize that our NATO commitment itself is sound and vital. They agree, as I believe most of you would, that the Alliance has worked well.

Two world wars have taught us that political stability in Europe must be founded on a policy of collective security—a common defense. For 21 years now NATO has helped provide Western Europe considerable political stability, while the region has attained the highest level of prosperity in its history.

But, it is said, the likelihood of war today seems remote, the threat from the East perhaps is largely imagined. Therefore, the argument is made, it is time to reassess our military contributions to European defense, and reduce them substantially.

I have no quarrel with the idea of reassessment. The world does change, and our responses must of course alter as necessary to meet new challenges.

I would agree also that at the present time an attempt by the Soviets to use military force to upset the political-military balance in Europe is not probable. But a key reason for this is the very presence of our NATO forces. We would be wrong to regard the European situation as one of self-sustaining stability. In fact, the Soviets are at present most active directly in the Mediterranean and in building up their conventional forces, and indirectly in the Near East.

We do not assume that the intentions of the Warsaw Pact are certainly aggressive. But based on past experience, we cannot with certainty conclude that they will always be peaceful, either. Unilaterally reducing the NATO forces because an equilibrium now exists disregards the fact that those forces are an essential component of that equilibrium.

We may be convinced that the Soviets have no present plans for military action against the West. But could we be sure that the Soviets would not respond to an opportunity to spread their influence by military means if the occasion presented itself? Could we say with any assurance that Soviet policy on the central front would remain unchanged if they saw an opportunity to chip away at Western Europe, and do so with no challenge from our side, short of all-out nuclear war?

Opportunists

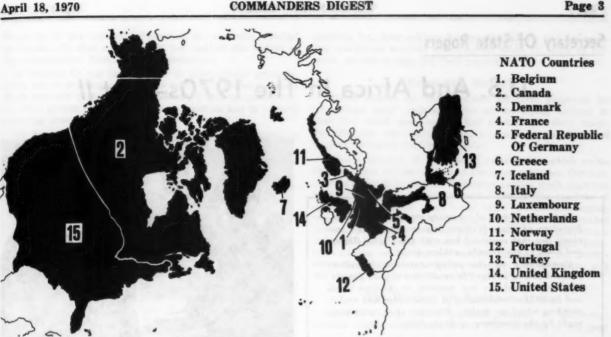
The record of Soviet military involvements since World War II shows that they are opportunists. They will use military forces as needed when they think they can do so without interference from the West. Incidents from the invasion of Hungary in 1956, to the Berlin Crisis of 1961, to the Cuban missile emplacements in 1962, to the invasion of Czechoslovakia in 1968, forcibly demonstrate this.

Were we to remove or significantly reduce our forces defending Western Europe, we would present the Soviets with new temptations. If we did, we could not predict precisely what would happen. But there surely would be a greater likelihood of threats, blackmail, and attempts at domination, such as increased pressures on Berlin, or on individual members of the NATO Alliance. Each such probe would carry with it the dangers of miscalculation, over-reaction and war. Without the presence of our forces new power adjustments would have to Ap

April 18, 1970

ulti in 1 nee at l can me Eu for The rat of I this of : me neg the iro to : wit 4 pos tha teg are Pa

> do dep I



be made. The course of readjustment would be dangerous. The ultimate result surely would be less favorable to the West.

Nor is it realistic, or adequate, to think of the Soviet threat in terms only of columns of tanks moving across Europe. It need not even take the form of piecemeal military threats aimed at limited areas. For if a vacuum of power is created, the void can be filled and the advantage gained without actual employment of military forces. Soviet military forces could dominate Europe without ever being used, if there were no substantial forces to oppose them. No doubt the Soviets would prefer this. The case of Finland is an example. That sort of domination, rather than armed invasion, would be the most likely outcome of our unilateral withdrawal.

In short, our forces are not a mere vestige of Cold War thinking, countering the Soviet threat to a prostrate Europe of 20 years ago. Their justification is not in inertia or sentimentality, but in the requirements for a stable environment for negotiation in the 1970s. The capability of Soviet Union and the Warsaw Pact countries has not diminished. It would be ironic indeed if NATO's near-perfect success should cause us to forget the crucial mission of American conventional forces within the NATO defense structure.

A second group of arguments denies that our general purpose forces in Europe actually maintain stability. Some argue that these forces are unnecessarily large, in light of our strategic nuclear deterrent. Others says that our NATO divisions are too few to deter military adventures by larger Warsaw Pact forces.

Forces Serve Stabilizing Role

Careful analysis shows, however, that our forces in Europe do serve an important stabilizing role, and that the size of our deployments is just about right for that purpose.

For the first 15 years after World War II, the security of

Europe really rested on the United States' strategic nuclear deterrent. But the relationship between Soviet and United States nuclear capabilities has significantly changed. Today we live in an age of approximate nuclear parity. In that condition the range of situations in which nuclear weapons are a credible deterrent narrows. Neither we nor the Soviets can use strategic nuclear weapons against the other without grave risk of being ourselves destroyed in the exchange.

Therefore, the Soviet Union can no longer find believable a United States strategy founded on the notion that the United States and its Allies would meet Warsaw Pact non-nuclear aggression in Europe solely with the threat or the use of strategic or even tactical nuclear weapons. In this new era of nuclear parity, nuclear weapons cannot be the answer to all hostile acts. They leave us no option between doing nothing. or setting off a holocaust.

In this changed environment conventional forces emerge as an increasingly exploitable means for exerting either military or diplomatic pressure. The continued Soviet emphasis on such forces indicates an awareness of this trend. NATO too has anticipated nuclear parity, first by substantially improving its conventional warfare capability during the 1960s, and then by adopting in 1967 as strategic policy the doctrine of flexible response.

Given the importance of conventional forces, do those we have in Europe weigh heavily in the calculations of the Warsaw Pact? We have at present four and one-third combat divisions, as part of a total force of about 285,000 men, in Europe as our contribution to the NATO defense. They are the best trained, best equipped, and best supported forces in NATO today. We have substantial forces in the United States with which to reinforce them, and an airlift program to provide more rapid and flexible deployment capability. (To Be Continued)

lly al 100 in ide re ry. he re, nly. rld esby TU his ng tatly nal act we

ce-

an

es

ns

at

eir

f?

he

or-

al-

ar

ry

er-

ry

m-

58,

d-

ew

at

od

n-

he

he

he

to

70

ed of

April 18, 1970

Secretary Of State Rogers

Page 4

U.S. And Africa In The 1970s-Part II

In the second half of his policy statement on Africa, Secretary of State William Rogers covered the economic ties that continent has with the United States, and some of the specific problem areas.

Commenting on the policy statement, President Richard Nixon wrote: "It establishes a good foundation upon which we can respond to African needs and build that relationship of cooperation and understanding which we desire." Excerpts of the statement made by the Secretary of State follow.

An American economic assistance program in Africa is in United States' national interests. We wish to see African countries develop and take their rightful place in cooperative international efforts to resolve worldwide problems.

Ever since the wave of independence swept through Africa in the late '50s and early '60s, Western European nations and multidonor organizations have provided 60 to 70 per cent of economic assistance to Africa. Because of their strong traditional and historic links to Africa, we hope the European nations will continue to provide the bulk of foreign assistance to Africa. But the United States also has deep and special ties to Africa.

U.S. Assistance

The total U.S. share has, in fact, averaged about \$350 million a year for the past several years. This is about 20 per cent of all external assistance to Africa.

Our bilateral assistance program has included resources from the Agency for International Development, the Export-Import Bank and the Peace Corps. In the form of loans, grants and personnel, it has reached some 35 African countries. It has assisted national development programs, as well as regional projects.

At the same time, mindful of needs throughout the continent, we have decided to make our approach to African assistance more flexible than it has recently been:



PRESENTATION—During his visit to Lusaka, Secretary of State William Rogers presented Zambia's President Kenneth Kaunda with a moon rock and the Zambian flag carried to the moon by Apollo 11 astronauts. The U.S. Secretary of State visited 10 countries in Africa on his recent tour.

• We will to the extent permitted by legislation also provide limited assistance in other African countries to projects which contribute significantly to increased production and revenues.

• We will continue to emphasize aid to regional programs and projects, giving special attention to innovative ways to make our efforts effective.

• We will more and more orient the program of the Peace Corps to meet the technical, educational and social development needs of African nations.

• We will concentrate our economic assistance in the coming years in the fields of agriculture, education, health including demographic and family planning, transportation and communications.

International Assistance

We intend to provide more assistance to Africa through international institutions and multidonor arrangements. We contribute 40 per cent of the budget of the UN Development the I tion Ban sult inv A reg

to

Afr ope bou nat: mod reco ing econ arra

T in inde inve stat

four indu new T fact conc effo

> Ame turs inve

April 18, 1970

ry

ed

of

IT.

oro-

ects

and

ams

s to

eace

lop-

om-

in-

and

ough

We

ment

Program; 40 per cent of its program is now being directed to Africa. We also contribute 40 per cent of the budget of the International Development Association.

In addition to our participation in international organizations, we are working more closely with other donors in World Bank and IMF (International Monetary Fund) sponsored consultative groups for several African countries, and in projects involving several donors.

An important portion of our assistance to Africa supports regional projects and regional institutions.

Any serious appraisal of the development prospects in

'We take our stand on the side of those forces of fundamental human rights in southern Africa as we do at home and elsewhere.'

Africa makes clear the need for much greater regional cooperation. Many African nations are small; their national boundaries frequently split natural economic regions. Most national markets are too small to support industry using modern technology. Africans have already demonstrated their recognition of the need for regional cooperation by establishing regional educational, technical and research institutes, economic communities, common markets, common financial arrangements and even common currencies.

Private Investment

There has been a steady growth in U.S. private investment in Africa since most of the African nations achieved their independence. By the end of 1968 the value of U.S. private investment in OAU (Organization of African Unity) member states was almost \$2 billion.

Mineral and petroleum development account for nearly threefourths of current U.S. private investment in Africa. The industry is exceptionally able to seek out new sources and new opportunities to meet growing demands.

The same is not the case, however, for investments in manufacturing, agro-business and commerce. Thus, we are already conducting certain programs to stimulate American private efforts in these fields.

• We have an increasingly successful . . . effort at getting American investors to look at integrated, large-unit agricultural schemes in Africa.

• We are also seeking to interest medium size American investors to look at opportunities to help contribute to African

COMMANDERS DIGEST

THIS PUBLICATION CONTAINS OFFICIAL INFORMA-TION, NEWS AND POLICY, DIRECT FROM WASHINGTON AUTHORIZED SOURCES.

Published weekly by American Forces Press Service, 1117 N. 19th St., Arlington, Va. 22200, a unified activity of the Office of Information for the Armed Forces, OASD (M&RA). Reproduction of content is authorized. Suggested dateline for materials used is WASHINGTON (AFFS). markets, i.e., flour milling, bus transportation; and for meeting specialized markets which Africa could fill, such as plywood, shrimp fishing and food processing.

Expanding Markets

Several months ago the President set forth proposals for generalized tariff preferences for all developing nations, so that they could more readily find markets for their manufactured and semi-manufactured products in the developed nations, including the United States.

We are mindful of the special relationship which exists between some African and some European countries. Our purpose, however, is to give all developing nations much improved access for exports of their manufactures to the markets of all developed nations on an equal basis. We are also urging the elimination of discriminatory tariffs—sometimes called "reverse preferences"—which put our goods at a competitive disadvantage in many African markets. We hope that European nations see no linkage between eliminating the preferences they currently receive in some 20 African nations and their levels of aid to those countries.

The Problem Of Southern Africa

One of the most critical political problems of continental concern relates to southern Africa. The problems of southern

'Our relations with the Republic of South Africa have been a matter of particular attention.'

Africa are extremely stubborn. Passions are strong on both sides. We see no easy solutions.

Yet the modern world demands a community of nations based on respect for fundamental human rights. These are not only moral and legal principles; they are powerful and ultimately irresistible political and historical forces. We take our stand on the side of those forces of fundamental human rights in southern Africa as we do at home and elsewhere.

In Southern Rhodesia, we have closed our consulate. We have also determined not to recognize the white-minority regime in Salisbury and will continue to support UN economic sanctions.

Our relations with the Republic of South Africa have been a matter of particular attention. We do not believe cutting our ties with this rich, troubled land would advance the cause we pursue or help the majority of the people of that country. We continue to make known to them and the world our strong views on apartheid. We are maintaining our arms embargo.

In . . . these ways, as well as in positions taken in the United Nations and through diplomatic channels, we shall work to bring about a change of direction in parts of Africa where racial oppression and residual colonialism still prevail.

At the same time, we cannot accept the fatalistic view that only violence can ultimately resolve these issues. Rather we believe that solution lies in the constructive interplay of political, economic and social forces which will inevitably lead to changes.

To Meet Technology's Challenge

Page 6

(Continued From Page One)

complex and uncomfortable . . The theme of Brave New World is not the advancement of science as such; it is the advancement of science as it affects human individuals."

Certainly all of us would agree that technology has peril in it-as well as opportunity and challenge.

Last year at this symposium, Professor Bates raised an important warning flag when he said, "Automation is part of the largest process of social change." Surely this conviction must underlie our management if we are to best use this American strength. Unless it does, and unless the public is both protected from the abuse of technology, and convinced that it is protected, we may well see the growth of attitudes which can hinder technology's progress.

On the subject of attitudes, it is evident to everyone in our country today that we do know a great deal about building rockets and computers and automatic production procedures. But it is less evident that we know how to weave this sort of knowledge into national programs that will meet human needs. Learning to do this is probably one of the biggest jobs we face.

The general welfare must be guarded and technology's progress must be continued. The Luddites showed many years ago that it is both foolish and futile to smash the machinery of the future. Rather, as The National Academy of Science noted recently:

"What is needed, clearly, is a wide diffusion of deeper understanding about technology and deeper concern about its implications."

In our formative years, the United States grew as the result of the initiative and drive of rugged individualists. Operating in a permissive social environment, with profit or loss sometimes the only criteria, people were largely unconcerned about the negative effects of technology.

The vast resources of the land contributed to this. So did the relative infancy of technology. Generally its adverse impacts were quite localized.

Growth Of Technology

Applauded for its contributions, technology was seldom seen as a problem. But, like all infants, it continued to grow. Today it involves us all. Developments are difficult to localize. The negative effects are too significant to ignore. Untreated sewage dumped into the Potomac at Alexandria (Va.) wipes out oyster beds in Chesapeake Bay. Waste in the Chattahoochie makes East Point (Ga.) look elsewhere for drinking water.

Grouped with these we have such long-standing concerns as the danger of nuclear destruction, and such newcomers as the fear of expanding techniques for personal surveillance and manipulation of our thoughts.

Singly, each of these points merits our attention. In the aggregate they show why technology and planning must interlock. The present urban crisis provides a clear example of entrapment by unexpected technological effects.

In this instance the automobile is a primary contributor. Its fumes blight our cities; its convenience has both encouraged the flight to suburbia and eroded urban transportation; and its multiplication has clogged the roads leading to the city and the streets in it.

In addition, farm machinery has become so efficient that the small farm has given way to the agricultural corporation. In its wake the rural poor have gone to the cities where they have become the urban poor.

Industry, through automation, has become less-dependent upon unskilled labor, and in the wake of this we have had widespread pockets of urban unemployment. With industry and the high salary help leaving the city, the tax base inevitably eroded. This meant, of course, fewer and poorer public facilities for people often unable to provide private replacements.

These disintegrating facilities have tended to perpetuate themselves as the increasingly unattractive and inefficient city has hastened the flight of additional industries and people.

I do not suggest, of course, that even Solomon, in all his wisdom, could have foreseen these interactions decades before they happened. He might, however, have done a better job than we have of recognizing that technology was going to bring about major population shifts, and that the resultant problems were going to require imagination and foresight.

Effects Of Technology

We need better forecasting and we need planning that starts from a national perspective. The effects of technology, like our air and our water, are sweeping in scope. Of great magnitude they should command all of our attention and all of our tools.

I stress this because I sometimes feel that we may draw back from using the only means that can see us through these difficulties: the tools of technology.

In the case of our saturated airways, for example, the FAA (Federal Aviation Agency) has been operating a unique system at the Atlanta airport which combines controllers, computers and radar. By digitizing radar targets we have been able to enlist computer help in visualizing airborne aircraft. This has done away with the need for a lot of verbal communications. It has also given the controller much more time to spend on those actions requiring immediate solutions.

This project has been successful enough that there are plans to expand it in the next two or three years to cover 62 terminal areas. It certainly demonstrates that technology can provide answers, if the right demands are made.

Way Of The Future

Speaking for the Air Force, we have no intention of backing away from the use of whatever tools technology can provide. Perhaps, because our mission has long centered on the use of technical equipment, we are fairly well convinced of what it can do. We are confident that technology is the way of the future. This is doubly true with respect to computers.

Not too many people are aware of the extent of Air Force involvement along these lines. But we do operate more than a thousand general purpose computers around the world. This is about one-quarter of the total used by the Federal Government.

Over half of these are installed at individual bases. This may give you an insight into how we feel automation can be interwoven with human resources.

We have been able to computerize many jobs. This has allowed us to do that particular work with fewer people, fewer errors and at less cost. It has also tended to motivate our remaining work force by eliminating routine, tedious jobs. Furthermore, we have been able to use technology to train

April 18, 1970

ou ret ins tra lio fre

ple we tha to sir ha

wi

tec mi 8W spe due the and lab be U.S dat 1 me ject boo hig I Off abo mil inst trai job

othe T lem our in s syst wea mat

assu

in i

syst

ing

V

B be e tem

April 18, 1970

3

our people for skilled work. This can pay immediate, sizable returns when you reflect that the Air Force alone uses 130,000 instructors, offers 3,000 courses, and has—since its inception trained over seven million people. Within DOD, about a billion dollars a year is spent on technical training extending from auto mechanics to computer programming.

When we have been able to supplement personal instruction with programmed learning and teaching devices, we have completed courses faster. Although only on the threshold here, we now have five complete Air Training Command courses that use only programmed instruction. We have also been able to use teaching machines to bring some recruits up to a desired minimum sixth grade reading level. This particular group —Project 100,000 personnel—has done well once over the handicap left by their environments.

Civilian Use Of Resources

Through activities such as these we feel we are combining technology's promise with the nation's hopes. The transfer of military skills into related civilian areas goes on daily. I am aware, for example, of a case where one of our electronics specialists required only a six-week course to become a production control specialist for a civilian electronics firm.

Pleased with this sort of thing, we're particularly proud of the State of Utah's civilian use of Air Force course materials and training aids.

In this instance, five institutions in the state served as laboratories to see how well Air Force course materials could be adapted for civilian use. The project was funded by the U.S. Office of Education with the Aerospace Educational Foundation being the prime contractor.

Two of the three courses offered—electronics and aircraft mechanics—were especially selected by the state to fill projected manpower requirements. The courses used Air Force books, slides and training aids, but were taught in the selected high school or college by the regular civilian instructors.

In December the program was completed. Both the U.S. Office of Education and the State of Utah are enthusiastic about the results. It has been conclusively shown that many military technical courses can be easily transferred to civilian institutions. For the civilian community this means reduced training costs and the addition of materials relevant to the job environment. Certainly this is a profitable way of matching the resources of technology with the needs of the nation. We have, of course, gotten great use of our computers in other, less-dramatic areas.

They have helped us immeasurably with our logistics problems. We have been able to save a lot of money by automating our supply network. For example, in 1958 it took \$9 billion in spare parts to support \$26 billion in weapons and supporting systems. Today we support a larger force—\$39 billion in weapons—with \$8 billion in spare parts. In other words, automated data-processing equipment, reduced pipeline time and assured communications have led to a 10 per cent reduction in inventory with approximately a 50 per cent increase in system investment.

Good Management Necessary

But it is only through good management that technology can be exploited. Unless we managers adjust ourselves to the tempo of technology we will be unable to grasp its opportunities, which are sure to increase in number. This increase, by itself, will demand additional decisions. And these decisions won't live long in a climate of change constantly presenting new alternatives. Furthermore, as we are discovering, the overlap of growing technology is pushing each of us into areas previously beyond our purview. This, also, adds to our responsibilities.

Unfortunately, there is no guidebook we can follow to get us through this maze. Instead, we may be writing one. We can, however, utilize the latest information-handling devices to give us some of the raw material we need for making decisions. But, at the same time we must not be deceived by the abundant information available. The "on-the-scene" manager can still probably do his particular job better than his superiors. Sometimes technology can invite us down inefficient paths.

Perhaps the most significant question facing us is the point I raised earlier when I mentioned society's concern about beneficently directing technology.

Side Effects

Maybe the strongest hand we hold here is our new consciousness of technology's side effects, and their impact upon broad community goals. Possibly this represents the first move toward a managerial adaptability which can match the continuous challenge of technology.

A good second move might be made within the governmental departments, themselves. Most likely, each of these either originates, or finds itself involved with technology. A watchdog within the department might sound the alarm if technology at any time threatened the public welfare. Not only that, it might also keep us alert to technological opportunities we could otherwise miss.

A step beyond this suggestion would be to tie-in the technology-assessments of the various departments of government. This grouping of evaluations could provide a unique overview. Consolidated, such reports might be extremely useful to the new Domestic Council; or to the technology assessment efforts of agencies such as the Office of Science and Technology and the National Science Foundation.

Over-all Effects

Certainly as we move forward with our technology we need to examine carefully its over-all effects. We need to be advised as to which technologies will serve us well, and which could lead to "unwanted, unintended and unanticipated consequences." Proper assessment may be difficult, or even impossible. But, as we have learned in other disciplines, it is not enough to test components. Only a forecast of the effects of total systems will provide the answers we need for proper planning.

The task is formidable. If we are to succeed in assessing technology, contemporary assumptions must be questioned; habitual thought patterns examined; and extrapolations broken free from first order rigidity.

As President Kennedy said:

"... the power of science and the responsibility of science have offered mankind a new opportunity not only for intellectual growth but for moral discipline; not only for the acquisition of knowledge, but for the strengthening of our nerve and our will".

nis ore ob ng ms

Ô

1.

Y

1t

d

h

ly

1.

8.

te

ty

niour ack iffi-AA

rts

ike

to has It

ans inal vide

ride. e of can ure.

cing

orce in a is is nent. This n be

our jobs. **COMMANDERS DIGEST**

April 18, 1970

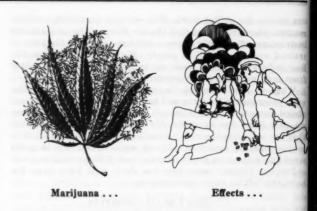
Effects Of Marijuana

By Navy Captain F. J. Linehan, Medical Corps Office Deputy Assistant Secretary of Defense (Health)

The current spate of literature on narcotics and dangerous drugs in the news media is the source of widespread confusion as to the real effects of marijuana both during and between uses of the drug. Indeed, because of the dearth of fatalities directly due to marijuana overdosage and the lack of physical dependence on it, we are often urged to believe that it is, in fact, not a dangerous substance and possession of it should be legalized.

Part of the problem is related to the fact that the potency for mind-altering effect varies greatly. The active principle, tetrahydrocannabinol (THC) may be in very low quantity and diluted by other substances in some supplies of marijuana while that obtained in another area (e.g. Vietnam) contains a much greater amount of the active principle. Thus, statements about the acute effects of smoking a given amount of marijuana should be accepted with caution unless the quality of the substance used is known.

It is beyond question that the acute effects of marijuana, although unpredictable in terms of severity and the exact change in thought processes, result in reduced effectiveness, reliability and response to reality. Thus, it is accepted that its use is exceedingly dangerous in a military setting. Recent scientific studies have confirmed disturbances of immediate memory which induce gaps in stream of thought and aberrations of speech content. Small amounts of THC (equivalent to that found in a high quality marijuana cigarette) produce somatic discomfort, dizziness, feeling of "weirdness" and a dream-like floating state. Higher doses of THC provoke delusions, hallu-



cinations and psychotic reactions similar to those seen with LSD.

In addition to these demonstrated aberrations due to the immediate adverse effects of marijuana, evidence is gradually accumulating of abnormalities seen in chronic users when they are not under the immediate effects of the drug. Recent reports speak of subtle but ominous changes among chronic marijuana users: decreased drive, apathy, distractability, poor judgment, introversion, depersonnalization, diminished capacity to carry out complex plans or prepare realistically for the future, and progressive loss of insight. This complex of effects has been called the amotivation syndrome.

Scientific studies, both in the United States and abroad, to further document the effects of continuous marijuana use are planned. It is anticipated that, since the active principle has been purified, use of the drug in greater concentrations, such as in pills rather than smoking, will become more widespread with consequent occurrence of more psychotic reactions.



For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price 5 cents (single copy). Subscription Price: \$2.50 per year; \$3.25 additional for foreign mailing. \$2.50 COVERNMENT PRINTING OFFICE: 1969 383/221/S-42

Page 8

